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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/691,778

10/23/2003

Jerry A. Pickering

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7165

7590 11/28/2007
MARK G. BOCCHETTI
EASTMAN KODAK COMPANY
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EXAMINER

AFZALI, SARANG

ART UNIT

PAPER NUMBER

3726

MAIL DATE

DELIVERY MODE

11/28/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/691,778

Applicant(s)

PICKERING ET AL.

Examiner

Sarang Afzali

Art Unit

3726

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE filed 9/17/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-65, 67-70, 72-79 and 82-88 is/are pending in the application.
- 4a) Of the above claim(s) 1-63, 67, 68, 72-79, 82-85 and 88 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 64, 65, 69, 70, 86 and 87 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/17/2007 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 64, 65, 69, 70, 86 and 87 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eddy et al. (US 6,159,588) in view of Donnelley et al. (US 3,669,707).

As applied to claims 64 and 65, Eddy et al. teach a fuser member **20** (Fig. 2) comprising a base **4**; and a fusing surface layer **5**; comprising: a fluoroelastomer (col. 6, lines 25-26); and filler particles (col. 6, lines 27-41), with a modulus greater than the modulus of the fluoroelastomer (Modulus is a measure of stiffness of a given material.

The filler is made of aluminum, which has a modulus greater than a fluoroelastomer which is not as stiff) at the fusing temperature, and with a mean particle diameter of at least about 1 to about 100 microns (overlaps the claimed range of at least about 50 microns), in at least the minimum proportion by volume of the fusing surface layer, and with at least the minimum mean particle diameter.

Eddy et al. teach the invention cited above but do not explicitly teach the plastic filler particles such as polytetrafluoroethylene.

Donnelley et al. teach using plastic filler particles such as polytetrafluoroethylene (col. 4, line 66) comprise from about 0.1 to about 20 weight percent (col. 6, lines 18-20, overlaps the claimed ranges).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Eddy et al. with plastic filler particles such as polytetrafluoroethylene, in light of the teachings of Donnelley et al., in order to reduce offset and mechanical breakdown as suggested by Donnelley et al.

Regarding the limitations "so that, in fusing toner to substrate, the fuser member generates an image having a gloss number of about 5 or less" and "in fusing toner to substrate, the fuser member, at the equilibrium surface roughness, generates an image having a gloss number of about 5 or less", a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the

claim. The filler particles are heat conducting and have a greater thermal conductivity than the fluoroelastomer because the filler is made of aluminum.

As applied to claim 69, Eddy et al. teach that the filler particles, with a modulus greater than the modulus of the fluoroelastomer at the fusing temperature, comprise from about 10 percent by volume to about 20 percent by volume of the fusing surface layer (overlaps claimed range of about 10 percent to about 40 percent).

As applied to claim 70, Eddy et al. teach that the filler particles, with a modulus greater than the modulus of the fluoroelastomer at the fusing temperature, comprise from about 10 percent by volume to about 20 percent by volume of the fusing surface layer (overlaps claimed range of about 8 percent to about 35 percent), and have a mean particle diameter greater than about 55 microns.

As applied to claims 86 and 87, Eddy et al. modified by Donnelley et al. teach the invention cited above.

Donnelley et al. further teach using plastic filler particles such as polytetrafluoroethylene (col. 4, line 66) comprise from about 0.1 to about 20 weight percent (col. 6, lines 18-20, overlaps the claimed ranges).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Eddy et al. with plastic filler particles such as polytetrafluoroethylene, in light of the teachings of Donnelley et al., in order to reduce offset and mechanical breakdown as suggested by Donnelley et al.

Response to Arguments

4. Applicant's arguments filed 8/20/2007 have been fully considered but they are not persuasive.

Applicant argues that "Eddy, at col. 6, lines 25-67 requires a thermally conductive filler be added to the outer fluoropolymer layer. The thermally conductive layer can be a metal oxide, preferably alumina. PTFE is not thermally conductive, thus Eddy teaches away from the present invention. Donnelley, at col. 4, line 71 to col. 5, line 15 teach that fillers for a fixing roller require a low surface energy and that conventional fillers of inorganic oxides have surface energies that are suitable. Thus, the teaching of Donnelly and Eddy are in opposition to one another. This does not provide a proper obviousness-type rejection."

As stated in an earlier Advisory Action mailed on 8/27/2007, The Examiner respectfully disagrees with the above argument. Note that Eddy et al. ('588) teach a whole array of different fluoroelastomers (col. 5, lines 28-59) that are also disclosed by the Applicant (Specification, paragraphs [0109]-[0115]) as suitable fluoroelastomers for fusing surface layer.

Although Eddy et al. ('588) teach that thermally conductive filler such as metal oxide is added to the fluoropolymer layer (col. 6, lines 25-27), but also teach that other filler particles such as silicon particles are added to the fluoropolymer layer in order to increase release of toner from the fuser member (col. 6, lines 5-7) and other fillers including coloring agents, reinforcing fillers, and processing aids may be incorporated in the layers provided that they do not affect the integrity of the fluoropolymer material (col.

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7, lines 21-33). As such, Eddy et al. ('588) teach that many different fillers can be added to the fluoropolymer layer in order to improve certain characteristics of the layer.

Donnelley et al. teach a fuser roller wherein plastic filler particles such as polytetrafluoroethylene (col. 5, lines 8-16) is added to elastomer for its known release abilities, temperature resistance, and reinforcing properties.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have used polytetrafluoroethylene with appropriate particle size as a filler for Eddy et al. ('588) in light of teaching of Donnelly et al., in order to provide an elastomer for a fuser roller with improved and effective characteristics such as high release abilities.

Note that Applicant argues that "PTFE is not thermally conductive" (Remarks, paragraph 3, lines 11-12) contrary to the Applicant's disclosure (specification, paragraph [044]) wherein "polytetrafluoroethylene" is taught to have some thermal conductivity.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarang Afzali whose telephone number is 571-272-8412. The examiner can normally be reached on 7:00-3:30 M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on 571-272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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11/17/2007



DAVID P. BRYANT
SUPERVISORY PATENT EXAMINER

11/19/07